TRANSMITTAL SHEET

Dames & Moore

12 COMMERCE DRIVE • CRANFORD, NEW JERSEY 07016-1101 • PHONE (201) 272-8300

To: USEPA
26 FEDERAL PLAZA
NEW YORK, NY 10278

Date 05/12/89

Your Order No.

Our Job No. 14485-002-010

Attention: JANET FELDSTEIN
SCP CARLSTADT RPJECT OFFICER
Subject: SCP CARLSTADT SITE

We are sending you via COURIER the following

1.-DRAFT POP REVISION #10
2.-LETTER ADDENDUM TO ABOVE
3.-LETTER DESRCRIBING PROCEDURES FOR SAMPLING OF PRIVATE WELLS

This is / These are for YOUR REVIEW AND COMMENTS

No. of copies submitted: 10 each

Copies to: S.HOFFMAN Esq. (COHEN, SHAPIRO et. al)

Dames & Moore

By THEODOROS TOSKOS

PROJECT GEOLOGIST

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12 COMMERCE DRIVE, CRANFORD, NEW JERSEY 07016-1101 (201) 272-8300

May 11, 1989

Ms. Janet Feldstein
SCP Carlstadt Project Officer
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278

Re: Revision 10
Project Operations Plan
SCP Site Remedial Investigation
Carlstadt, New Jersey

Dear Ms. Feldstein:

Pursuant to the provisions of Revision No. 10 to the SCP Site Project Operations Plan, and based on our meeting of April 14, 1989, we are pleased to submit this letter detailing the particulars of the proposed next phase of the off-site investigations for the above project.

PROPOSED PROGRAM OF INVESTIGATIONS

The following activities are proposed for this phase of investigations:

- Installation of four rock monitoring wells
- Installation of two rock observation wells
- Installation of five till monitoring wells
- Installation of two shallow piezometers
- Collection of ground water samples from the four rock monitoring wells and the five till monitoring wells
- Measuring of ground water levels in all the existing and proposed wells
- Geophysical and geohydrologic testing of selected wells

RATIONALE

Two piezometers will be installed in the shallow aquifer at the locations shown in the attached figure to evaluate ground water flow patterns on the northern bank of Peach Island Creek. Ground water level measurements at these piezometers will provide information on the

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direction of ground water flow under the northern bank of Peach Island Creek. This information will help evaluate the potential for ground water under flow beneath Peach Island Creek.

SHALLOW AQUIFER

Two piezometers will be installed in the shallow aquifer at the locations shown in the attached figure to evaluate ground water flow patterns on the northern bank of Peach Island Creek. Ground water level measurements at these piezometers will provide information on the direction of ground water flow under the northern bank of Peach Island Creek. This information will help evaluate the potential for ground water under flow beneath Peach Island Creek.

TILL AQUIFER

Using average as well as reasonable ranges of values of hydrologic parameters obtained during the course of the on-site and off-site investigations, it was estimated that over a 40-year period, a molecule of water moving in the till aquifer could cover a distance of approximately 500 feet. Based on that assumption and considering our understanding of ground water flow directions, locations were selected to install four ground water monitoring wells. These locations span an arc that intersects the range of ground water flow direction vectors. These wells will be sampled to provide ground water quality information.

In addition, one till monitoring well will be installed to the north of the site to provide information on the side gradient geohydrologic conditions and ground water quality.

BEDROCK AQUIFER

Four monitoring and two observation wells are proposed for this phase of the investigation. Installation of these wells is expected to proceed in three phases:

- Installation of two bedrock monitoring wells, one to the east and one to the west of the site. Monitoring of water levels in these wells will provide a better understanding of the near-site ground water flow direction.

- Based on the information from the above task, two more monitoring wells will be installed: one to the north and one to the south of the site in the downgradient and upgradient position, respectively.

- Two observation wells will be installed approximately 1/4 mile away from the site to provide information on the regional ground water flow regime in the bedrock.

This information will be utilized in planning the next phase of investigations. Based on the outcome of the sampling of the off-site private wells, one or both of these wells may ultimately be installed as monitoring wells.

SPECIFICS

Location Map

A scaled location map showing the location of the proposed wells is attached. The tax assessment map of the municipality of Carlstadt was utilized as a base map.

Shallow Aquifer

The shallow piezometers will be constructed in accordance with the specifications for water table aquifer piezometers, as described in POP Revision 10. In all likelihood, these wells will be completed flush-mounted with a water-tight curb box. Only water level readings are planned for these points.

Till Aquifer

Till aquifer monitoring wells will be constructed in the same was as the existing till wells, and in accordance with POP Revision 10. Ground water levels will also be measured and recorded. Ground water samples will be collected and analyzed for the parameters listed in POP Revision 10 from all five wells. If any one of these wells is found to contain the same chemicals as previously identified on site, the need to re-sample that well and those upgradient of it and lying along the same flow line will be evaluated to provide information on contaminant migration rates.

Bedrock Aquifer

Both monitoring and observation wells will be constructed with a 25-foot open hole, unless water is not encountered in this interval, in which case drilling will continue until a yield of approximately 5 gpm is obtained. At any rate, the saturated interval will not exceed 25 feet.

All four wells will be cored. In addition, temperature, resistivity, spontaneous potential and gamma logging will be performed in each of these wells.

The bedrock monitoring wells will be sampled and analyzed for the parameters of POP Revision 10.

In addition, well MW-2R will be pump tested and the new wells will be utilized as observation points. A 24-hour test is proposed. The measurement intervals outlined in POP Revision 10 will be utilized. The proposed pumping rate is 3 gpm, and the pumped water will be collected.

SCHEDULE

Installation of these wells is expected to take 16 weeks. Fourteen days after completion of the last well, all wells will be sampled. Sampling of these wells is expected to span a one-week period. Validated results will be available 12 weeks after completion of sampling. If re-sampling becomes necessary, a separate schedule will be submitted.

A graphic representation of the proposed schedule is attached.

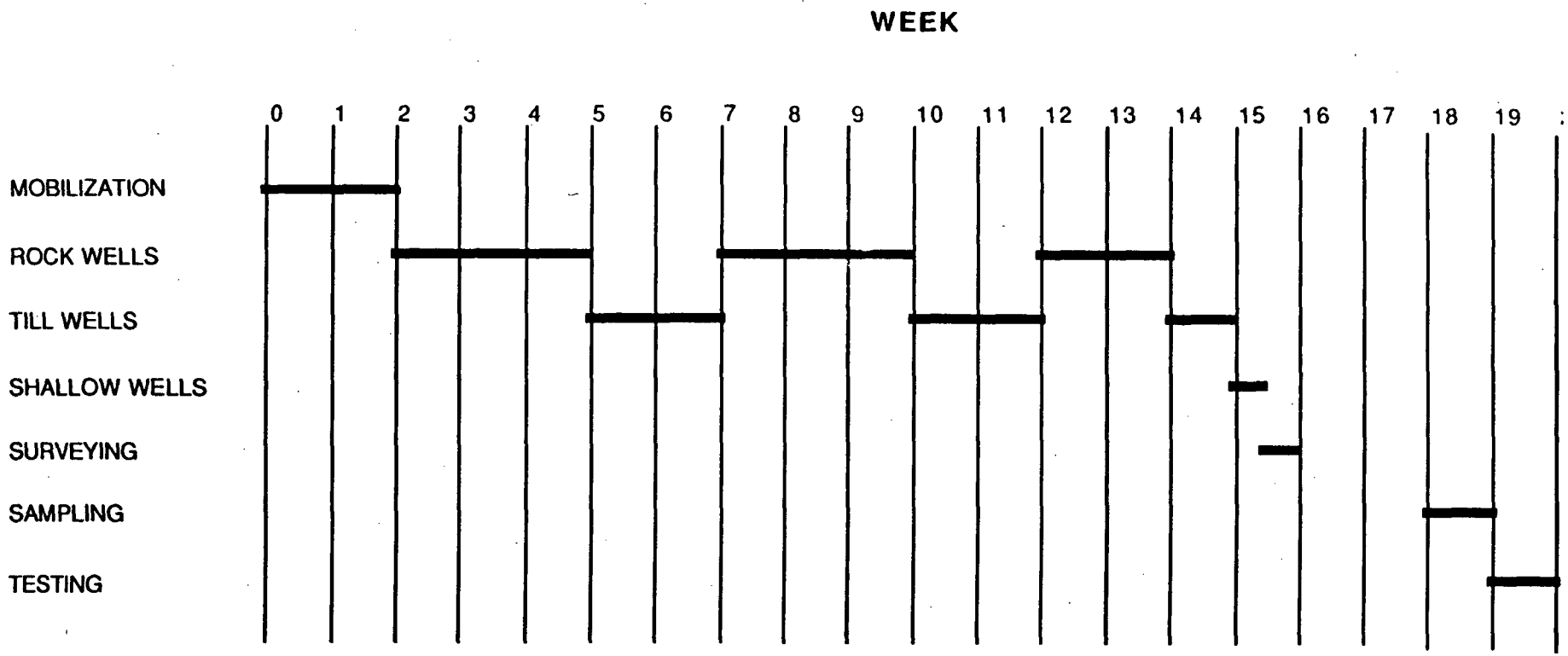
Please do not hesitate to contact us if you have any questions.

Very truly yours,

DAMES & MOORE

Theodoros Toskos
Project Geologist

TT/jhm
Attachment

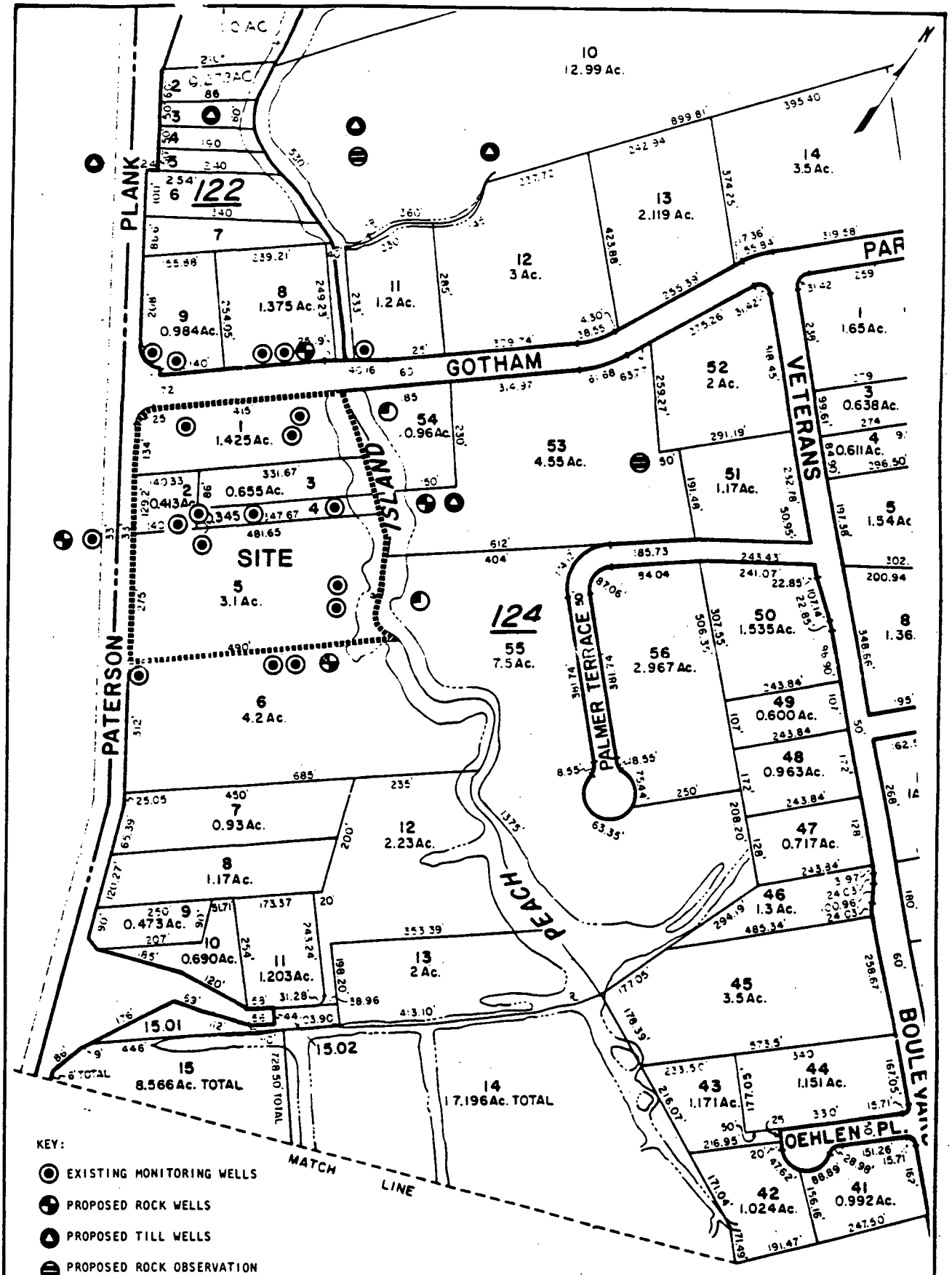


NOTES

1. Validated anlytical results will be avalble 12 weeks after sampling
2. This schedule does not include an inclement eather contingency

PROPOSED SCHEDULE OF INVESTIGATIONS OFF-SITE RI

SCP SITE
CARLSTADT, NEW JERSEY



KEY:

- EXISTING MONITORING WELLS
- PROPOSED ROCK WELLS
- PROPOSED TILL WELLS
- PROPOSED ROCK OBSERVATION WELLS
- PROPOSED SHALLOW "PIEZOMETER"

PROPOSED
OFF-SITE WELL LOCATION
SCP SITE
CARLSTADT, NEW JERSEY

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May 11, 1989

Ms. Janet Feldstein
SCP - Carlstadt Project Officer
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278

Re: Sampling of Private Wells
SCP Site
Carlstadt, New Jersey

Dear Ms. Feldstein:

As promised at the meeting of April 14, 1989, we are forwarding you the procedure we propose to use in sampling the private wells at Carlstadt.

Ground water samples from these wells will be obtained utilizing the existing pump and pressure distribution system. Samples will be taken directly from the well head whenever possible. This will eliminate chlorination or other treatment interferences, possible changes in water quality within the piping, mixing with water from other sources, etc. Wells that are on line will be sampled immediately, wells that are temporarily shut down will be pumped to waste prior to sampling, unless the owner explicitly prohibits this. A minimum of 15 minutes of purging is proposed. If at all possible, the total volume purged will be estimated or calculated.

The sample will be collected from a faucet or pipe as near to the pump as possible. Sufficient water will be allowed to drain to obtain a minimum of three exchanges of water from the piping. Allowances will be made for the pressure supply tank volume, if the sampling point is on the discharge side of such a vessel. If the sampling spigot is equipped with an aerator, it will be removed prior to sampling. The spigot wil be adjusted so that a slow, laminar flow is effected. Upon the discretion of the field personnel, teflon tubing may be used to effect a laminar flow and minimize aeration and atmospheric contact.

The samples will be analyzed for volatile organic compounds in accordance with the approved analytical protocols in effect at the time of sampling and analysis.

We expect to be able to perform this sampling within two weeks or receiving access agreements from all the well owners, or USEPA approval of these procedures, whichever occurs last. Sampling of the previously agreed upon five private wells could span the period of one

week, depending upon the particulars of the individual access agreements. Validated data will be available in 8 to 12 weeks after sampling, hinging upon the format of the deliverables.

Please do not hesitate to contact us if you have any questions.

Very truly yours,

DAMES & MOORE

Theodoros Toskos
Project Manager

TT/jhm